REMARKS

Claims 1, 4, 10, 19, 22, 23 and 23 are amended to more clearly recite the invention.

Support for the amendment is found in the existing claims and in the Applications on page 14 line 31 to page 15 line 36 in connection with Figure 11 and elsewhere.

*I. Claim objections*

Claims 1-5, 8, 11, 19 and 22-24 are objected to as having incorrect status identifiers.

The status identifiers have been corrected and this ground of objection is no longer deemed applicable and its withdrawal is respectfully requested.

*II. Rejection under 35 U.S.C. 103(a)*

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,115,040 – Bladow et al. These claims are considered to be patentable for the following reasons.

Amended claim 1 recites a system for "use in a first application concurrently operating together with a plurality of network compatible applications" comprising "an entitlement processor for enabling user access to a first application of a plurality of concurrently operating applications in response to validation of user identification information; and a communication processor employed by said first application of said plurality of concurrently operating applications for intermittently communicating an activity indication to a managing application within a timeout window, said activity indication being generated in response to user action and being communicated sufficiently often to prevent an inactivity timeout of said first application being initiated during normal operation of said first application by said managing application in response to said timeout window being exceeded". These features are not shown or suggested in Bladow.

The system of amended claim 1 includes "a communication processor employed by said first application of said plurality of concurrently operating applications for intermittently communicating an activity indication to a managing

application within a timeout window". The "activity indication" is "communicated sufficiently often to prevent an inactivity timeout of said first application being initiated during **normal operation** of said first application by said managing application in response to said timeout window being exceeded". Bladow does not suggest such features. As recognized in the Rejection page 3, Bladow does not teach an activity indication "being communicated sufficiently often" to prevent "an inactivity timeout of said first application being initiated during **normal operation** of said first application". However, the Rejection incorrectly states that it would have been obvious to have "applied the teachings of Bladow to include the features as claimed because Bladow's teachings would have provided the capability for monitoring and controlling a duration of a user session in the access control system".

The heartbeat function of Bladow is **fundamentally different** to the claimed system and comprises a different function employed in a different manner to achieve a different result that addresses a different problem. A heartbeat system, as relied on in the Rejection, provides a way of switching a user session of application and computer operation from a first server to a backup server (running parallel applications) in the event of a **failure** of the first server and has nothing to do with "activity" management at all. This mechanism also effectively prevents unwanted sessions from remaining open in the event of client application **failures** (Bladow column 4 lines 27-29). Specifically, the Bladow system provides a "keep alive message" passed between a client and a server, also called a "heartbeat". The "keep alive message" is sent **every** predefined period, e.g., 1 minute from a client application to the server" (Bladow column 4 lines 18-29). That is, the "keep alive message is **automatically** and **periodically** generated by the client application **independently of user initiated activity** in the application and is NOT an indicator of "**activity**" but merely that a client application has not terminated through hardware or software failure. The client application generates the "keep alive message" even when there is no user activity or other non-heartbeat related activity in the client application. Therefore, the Bladow system does not suggest a "first application" of a "plurality of concurrently operating applications for intermittently communicating an **activity** indication" generated "in response to **user action**" to "a managing application" to "prevent an inactivity timeout" of the "first application being initiated during **normal operation** of said first application". Also, since the "keep alive message" is automatically periodically generated by an application **independent** of **user** action, the Bladow system is incapable of "monitoring and controlling a duration of a **user** session in the access control system", contrary to the Rejection statement on page 3.

Further, in the Bladow system "when the client application fails to heartbeat consecutively for a predetermined period of time, for example, one hour, the server treats this client application as having exited by closing the application and performing cleanup routines associated with the application. This mechanism effectively prevents unwanted sessions from remaining open in the **event of** client application **failures**. Heartbeat transactions, as described above, are used to determine session continuity and to identify those processes which have died **abnormally** as a result of a process **failure**, system **crash** or a communications **failure**, for example" (Bladow column 17 lines 24-28). In contrast in the claimed arrangement, a "first application" of a "plurality of concurrently operating applications" intermittently communicates "an **activity** indication" generated "in response to **user action**" to "prevent an **inactivity** timeout" of the "first application being initiated" during "normal operation of said first application" in response to the "timeout window being exceeded". The communicated "activity indication" is used to identify a "**normal**" condition of user inactivity in employing an application whereas the Bladow heartbeat system identifies a purely **abnormal** condition comprising a failure circumstance. Further, applying the teaching of Bladow as suggested in the Rejection results in a system that communicates automatically generated periodic heartbeat signals provided by an application to a managing application to prevent timeout within a predetermined window that can only detect application **failure** and is incapable of preventing "**inactivity** timeout" of a "first application being initiated" in response to **user inactivity**.

Bladow addresses the problem of preventing "unwanted sessions from remaining open in the **event of** client application **failures**" under **abnormal** conditions (Bladow column 17 lines 24-28) and does not recognize, contemplate or address the problems of application **inactivity** management under "**normal**" operating conditions. Therefore, Bladow provides no problem recognition, motivation, or other reason for incorporating the claimed features. Consequently withdrawal of the Rejection of claim 1 under 35 USC 103(a) is respectfully requested.

Dependent claim 2 is considered to be patentable based on its dependence on claim 1. Claim 2 is also considered to be patentable because Bladow does not show or suggest use of an "intermittently communicated activity indication" that "prevents an **inactivity** timeout of said plurality of concurrently operating applications of a particular **user initiated session**" (of potentially multiple sessions operating on the computer). As previously explained in connection with claim 1,

Bladow fails to teach or suggest (and is incapable of) preventing "a managing application" from initiating "an **inactivity** timeout" of an individual "first application" without initiating reset of applications of a different operating session operating on the same processor, for example. Consequently withdrawal of the Rejection of claim 2 under 35 USC 103(a) is respectfully requested.

Dependent claim 3 is considered to be patentable based on its dependence on claim 1. Claim 3 is also considered to be patentable because Bladow does not show or suggest use of a "communication processor" that "stores a plurality of activity indications and sends said plurality of **activity** indications as a **batch** to said managing application". Bladow fails to provide a 35 USC 112 compliant enabling description or suggestion of such a "batch" mode. Consequently withdrawal of the Rejection of claim 3 under 35 USC 103(a) is respectfully requested.

Amended dependent claim 4 is considered to be patentable based on its dependence on claim 1. Claim 4 is also considered to be patentable because Bladow does not show or suggest "said normal operation comprises application operation **exclusive** of **abnormal** operation comprising an application **failure** condition and said user action comprises at least one of, (a) keyboard activity, (b) mouse activity, (c) other data entry device activity and (d) another user initiated PC application operation activity". As previously explained, the Bladow Heartbeat system "keep alive message" is automatically periodically generated by an application **independent** of **user** action. Bladow fails to suggest "intermittently" communicating an "**activity** indication to said managing application in response to a **user action**" at all. Consequently withdrawal of the Rejection of amended claim 4 under 35 USC 103(a) is respectfully requested.

Dependent claim 5 is considered to be patentable based on its dependence on claim 1. Claim 5 is also considered to be patentable because Bladow does not show or suggest a system in which the "first application and said managing application reside in the same PC" and "said **activity** indication notifies said managing application of activity by said first application and includes one or more of, (a) a session identifier for identifying a particular user initiated session, (b) a URL to be contacted if said activity notification is not successful, (c) an identification of a type of event preventing said activity notification from being successful". Bladow fails to suggest an "activity indication" that "notifies" a "managing application of activity by said first application and includes one or more of, (a) a **session identifier** for identifying a particular user initiated session, (b) a **URL** to be contacted if said

activity notification is not successful, (c) an identification of a **type of event** preventing said activity notification from being successful". Consequently withdrawal of the Rejection of amended claim 5 under 35 USC 103(a) is respectfully requested.

Dependent claim 6 is considered to be patentable based on its dependence on claim 1. Claim 6 is also considered to be patentable because Bladow does not show or suggest a system in which a "communication processor intermittently communicates **activity** indications to said managing application using a plurality of different commands including an activity notification command and a command involving at least one of, (a) determining a user operation session identifier from said managing application and (b) sending a URL to said managing application". Consequently withdrawal of the Rejection of claim 6 under 35 USC 103(a) is respectfully requested.

Dependent claim 7 is considered to be patentable based on its dependence on claim 1. Claim 7 is also considered to be patentable because Bladow does not show or suggest a system in which a "communication processor communicates to said managing application a request to receive an **activity** indication associated with said first application and maintained by said managing application, said activity indication indicating time since the last activity update". The Bladow Heartbeat system "keep alive message" is automatically periodically generated by an application **independent** of **user** action. Bladow fails to suggest a "communication processor" that "communicates to said managing application a **request to receive an activity indication** associated with said first application and maintained by said managing application, said activity indication indicating time since the last activity update". Bladow fails to suggest use of a centralized "managing application" for activity management at all, does not contemplate such a feature and is entirely incapable of such a function. Consequently withdrawal of the Rejection of claim 7 under 35 USC 103(a) is respectfully requested.

Dependent claim 8 is considered to be patentable based on its dependence on claim 1. Claim 8 is also considered to be patentable because Bladow does not show or suggest a system in which "individual applications of said plurality of concurrently operating applications independently intermittently communicate an **activity** indication to said managing application and said communication processor communicates with a browser application providing a user interface display permitting user entry of identification information for validation by said entitlement processor". Bladow fails to suggest "**individual applications** of said plurality of

concurrently operating applications" that "**independently** intermittently communicate an **activity** indication to said managing application". Bladow fails to suggest use of a centralized "managing application" for activity management at all. Consequently withdrawal of the Rejection of amended claim 8 under 35 USC 103(a) is respectfully requested.

Dependent claim 9 is considered to be patentable based on its dependence on claim 1. Claim 9 is also considered to be patentable because Bladow does not show or suggest a system in which "said communication processor communicates a time-out threshold value comprising said timeout window to said managing application". Bladow fails to suggest a "communication processor" that "communicates a **time-out threshold value** comprising said timeout window to said managing application" for **activity** management. Consequently withdrawal of the Rejection of amended claim 9 under 35 USC 103(a) is respectfully requested.

Independent claim 10 recites a system for "use by a managing application supporting concurrent operation of a plurality of Internet compatible applications" comprising "an input processor for intermittently receiving activity indications from a plurality of concurrently operating applications, an individual activity indication being generated in response to user action; an activity monitor for updating individual activity status indicators, corresponding to said plurality of concurrently operating applications, in response to said received activity indications; a comparator for comparing individual activity status indicators with corresponding time-out threshold values to identify an application time-out event indicated by a status indicator exceeding said time-out threshold and occurring during normal operation of an application; and a communication processor for communicating notice of said application time-out event to one of said plurality of concurrently operating applications". These features are not shown or suggested in Bladow. Amended independent claim 10 is considered to be patentable for reasons given in connection with claim 1 and other preceding claims.

Claim 10 is also considered to be patentable because Bladow does not show or suggest a system used "by a managing application" involving "intermittently receiving **activity** indications from a plurality of concurrently operating applications, an individual activity indication being generated in response to **user action**" and including an "activity monitor for updating individual activity status indicators, corresponding to said plurality of concurrently operating applications, in response to said received activity indications". Bladow fails to suggest "a system used "by a

managing application" involving "intermittently receiving activity indications from a plurality of concurrently operating applications and "an individual activity indication being generated in response to user action" and including an "activity monitor for **updating individual activity status indicators**, corresponding to said plurality of concurrently operating applications, in response to said received activity indications". Bladow fails to suggest "a comparator for comparing individual **activity** status indicators with **corresponding** time-out threshold values to identify an application time-out event indicated by a status indicator exceeding said time-out threshold and occurring during **normal operation** of an application; and a communication processor for communicating notice of said application time-out event to one of said plurality of concurrently operating applications". Consequently withdrawal of the Rejection of claim 10 under 35 USC 103(a) is respectfully requested.

Dependent claim 11 is considered to be patentable based on its dependence on claim 10 and for reasons given in connection with claim 10 and claim 4. Consequently withdrawal of the Rejection of amended claim 11 under 35 USC 103(a) is respectfully requested.

Dependent claim 12 is considered to be patentable based on its dependence on claim 10. Claim 12 is also considered to be patentable because Bladow does not show or suggest a system in which "an **activity** status indicator comprises a time indication identifying when activity of a particular application was last reported, and said time-out threshold comprises a predetermined time duration and said managing application determines said particular application to be inactive if said time indication exceeds said time-out threshold". Bladow fails to suggest communication of "an activity status indicator" that comprises a "time indication identifying when **activity** of a particular application was **last reported**, and said time-out threshold comprises a predetermined time duration and said managing application determines said particular application to be inactive if said time indication exceeds said time-out threshold". Bladow fails to suggest use of a centralized "managing application" for activity management or any ability (or any suggestion) to process **activity** indications for **individual** executable applications at all. Consequently withdrawal of the Rejection of claim 12 under 35 USC 103(a) is respectfully requested.

Dependent claim 13 is considered to be patentable based on its dependence on claim 10 and for reasons given in connection with claim 10 and claim

6. Consequently withdrawal of the Rejection of amended claim 13 under 35 USC 103(a) is respectfully requested.

Dependent claim 14 is considered to be patentable based on its dependence on claim 10. Claim 14 is also considered to be patentable because Bladow does not show or suggest a feature combination in which "said communication processor communicates **notice** of said application time-out event to applications of said plurality of concurrently operating applications that have previously requested a notification of session termination". Bladow fails to suggest communication of "notice of said application time-out event to applications of said plurality of concurrently operating applications that have previously requested a notification of session termination". Bladow fails to suggest use of a centralized "managing application" for activity management or any ability (or any suggestion) to process activity indications for **individual** executable applications at all. Consequently withdrawal of the Rejection of claim 14 under 35 USC 103(a) is respectfully requested.

Dependent claim 15 is considered to be patentable based on its dependence on claim 10. Claim 15 is also considered to be patentable because Bladow does not show or suggest a system in which "said communication processor communicates notice of said application time-out event in response to at least one condition of, (a) a received command requesting notification and (b) a received communication from an application session having previously produced a time-out event and (c) automatically upon generation of said time-out event". Bladow fails to suggest communication of "**notice** of said application time-out event" resulting from user **inactivity** in "response to at least one condition of, (a) a **received command** requesting notification and (b) a **received communication** from an application session having previously produced a time-out event and (c) **automatically** upon **generation** of said time-out event". Bladow fails to suggest use of a centralized "managing application" for communication of "notice of said application time-out event" based on user inactivity in an application. Consequently withdrawal of the Rejection of claim 15 under 35 USC 103(a) is respectfully requested.

Dependent claim 16 is considered to be patentable based on its dependence on claim 10 and for reasons given in connection with claim 10 and claim 5. Consequently withdrawal of the Rejection of amended claim 16 under 35 USC 103(a) is respectfully requested.

Dependent claim 17 is considered to be patentable based on its dependence on claim 10. Claim 17 is also considered to be patentable because Bladow does not show or suggest a system in which "said corresponding time-out threshold values comprise a common timeout period for said plurality of concurrently operating applications". Bladow fails to suggest a system in which "said corresponding time-out threshold values" comprise a "**common** timeout period for said **plurality of concurrently** operating applications" for use in activity management. Bladow fails to suggest use of a centralized "managing application" employing "a common timeout period for said plurality of concurrently operating applications" for executable application **activity** management at all. Consequently withdrawal of the Rejection of claim 17 under 35 USC 103(a) is respectfully requested.

Dependent claim 18 is considered to be patentable based on its dependence on claim 10. Claim 18 is also considered to be patentable because Bladow does not show or suggest a system in which "said comparator uses a predetermined default value for said time-out threshold values" in combination with the features of claim 10. Consequently withdrawal of the Rejection of claim 15 under 35 USC 103(a) is respectfully requested.

Independent claim 19 recites a system "supporting concurrent operation of a plurality of Internet compatible applications comprising "a browser application providing a user interface display permitting user entry of identification information and commands for a plurality of Internet compatible applications; and a managing application for receiving activity indications from a plurality of concurrently operating applications, an individual activity indication being generated in response to **user action**, said plurality of concurrently operating applications being initiated by user commands via said browser user interface, said received activity indications being provided by individual applications sufficiently frequently to prevent an inactivity timeout of said individual applications and during **normal operation** of an individual application". Amended claim 19 is considered to be patentable for reasons given in connection with claims 1, 4 and 10. Consequently withdrawal of the Rejection of claim 19 under 35 USC 103(a) is respectfully requested.

Dependent claims 20 and 21 are considered to be patentable based on their dependence on claim 19 and because of the additional feature combinations that they incorporate and for reasons given in connection with previous claims

Consequently withdrawal of the Rejection of amended claim 20 and 21 under 35 USC 103(a) is respectfully requested.

Amended independent method claims 22 and 23 mirror apparatus claims 10 and 1 respectively and are considered to be patentable for the same reasons.

Amended independent method claim 24 is considered to be patentable for reasons given in connection with claims 1 and 10 and for additional reasons. Consequently withdrawal of the Rejection of claims 1-24 under 35 USC 103(a) is respectfully requested

In view of the above amendments and remarks, Applicants submit that the Application is in condition for allowance, and favorable reconsideration is requested.

Respectfully submitted,

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